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MEMO

To:
Delta Stewardship Council

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From:
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Date:
November 2, 2010

ARCADIS Project No.:
RV 009825.0000

Subject:
Third Update on Matrix of Unresolved Issues

Here is a third update to our Summary of Unresolved Issues reflecting status updates and pending actions through November 2, 2010. This matrix was first included in the agenda package for the Council's meeting on September 23-24, 2010, and was intended to provide a summary of BDCP work in progress. As you know, the Steering Committee will release a BDCP public viewing draft on November 18 and it is anticipated that new and valuable information addressing unresolved issues will be available for review in this document.

Thank you for the opportunity to provide our support services to the Council. Please call me at 916.786.2889 if there are any questions.

SUMMARY OF UNRESOLVED ISSUES IDENTIFIED TO DATE
Version 1.0 09-13-2010

ISSUE NO.	ISSUE AREA	ISSUE	COMMENTS	PENDING INFORMATION REQUESTS	STATUS AS OF 11-02-10 BDCP Steering Committee meeting	PENDING ACTIONS AS OF 11-02-10 BDCP Steering Committee
	POLICY					
	Ecosystem & Water Management					
1		Compliance with CA SBX7 1 - Delta Reform Act				
1-a		<u>Alternatives:</u> BDCP evaluates a limited range of conveyance alternatives and a suite of conservation measures. Members of the BDCP Steering Committee (NGOs) suggest that the purpose and need statement is inadequate.	Additional ARCADIS review needed, awaiting information from BDCP team.			The November 4 BDCP Steering Committee meeting is slated to discuss the 'Alternatives Considered and Rejected" from Chapter 9. Updated information is pending.
			Though a range of alternatives are being considered, it does not appear that a "full range" of alternatives will be evaluated.	Information Requested. The Council and staff have requested information from the BDCP team regarding: 1) a description of the full suite of alternatives that have been and are being considered for conveyance and conservation measures; 2) a description of how BDCP plans to consider the recently released SWRCB flow criteria; 3) a description of specific water supply goals, including a definition of water supply reliability; 4) a description of how BDCP is considering means to reduce future reliance on the Delta as a water supply source; and 5) a description of how BDCP is addressing the issues of floods and levee failure as they relate to the ability to satisfy the co-equal goals. Additional questions are pending based upon recent requests to provide targeted feedback on specific issue areas that are critical to the development of the Delta Plan.		
			There may be insufficient schedule to address this issue prior to release of BDCP public draft document.			
			Four objectives were identified to meet the purpose: restoring the ecosystem, ensuring adequate water supplies, improving water quality, and strengthening levees. BDCP does not appear to include evaluation of alternatives that will reduce future exports. Can BDCP achieve its purpose if it includes evaluation of a reduced future exports alternative?			
			A follow-up to the benefit-costs analysis for environmental flows and agricultural exports in the recent publication of the SWRCB Delta Environmental Flow Requirement is needed to support BDCP's identification of a range of alternatives in order to achieve a balanced proposal supporting coequal goals of ecosystem restoration and system reliability.			

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			A goal of the Delta Reform Act is to restore critical ecological habitats and reduce the future reliance on the Delta as a source for water exports. Can improved reliability be achieved with reduced future water exports that have a greater certainty of delivery? At this time BDCP does not appear to notably reduce reliance on future water exports from the Delta.			The November 4 BDCP Steering Committee meeting is slated to discuss the 'Alternatives Considered and Rejected" from Chapter 9. Updated information is pending.
1-b		<u>Flow Criteria:</u> The BDCP does not use SWRCB flow criteria as a baseline for analysis.	The importance of flow criteria is defined by law and is explicit as to the intended use: "For the purpose of informing planning decisions for the Delta Plan and the Bay Delta Conservation Plan, the board shall, pursuant to its public trust obligations, develop new flow criteria for the Delta ecosystem necessary to protect public trust resources." (Water Code § 85086(c)).		Addressed during the BDCP Steering Committee meeting. The SWRCB will schedule a public workshop to discuss Delta flow issues and modeling results.	SWRCB Delta flows criteria will be discussed during a public workshop tentatively scheduled for mid-December.
1-c		<u>Operations:</u> BDCP has not fully evaluated both near- and long-term operations scenarios. Council and staff are discussing how to provide specific information for consideration on near-term operations and the Effects Analysis of those operations.	Additional ARCADIS review needed, awaiting information from BDCP team.		Addressed in BDCP Steering Committee meeting. DWR and USBR will jointly manage water operations based upon overview presented. Effects Analysis suggests areas for refinement of operations rules. Adaptive Range discussed within the Governance discussion (October 21) as the approach to manage water operations within the Implementation Office. Addressed in Issues For Discussion Document, Chapters 3, 6, 7 and Appendix A.	SWRCB Delta flows criteria will be discussed during a public workshop tentatively scheduled for mid-December.

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	PROGRAMMATIC					
	Ecosystem & Water Management					
2		<u>Purpose statement:</u> The BDCP project purpose statement suggests supporting full contract delivery requirements but is vague in providing objectives for restoration and species recovery.	Additional ARCADIS review needed, awaiting information from BDCP team.		Addressed in <i>Issues For Discussion Document</i> , chapter 3.	Questions remain regarding the efficacy of the BDCP purpose statement and whether it needs revision for consistency with the Delta Reform Act. Further discussion needed.
3		<u>Project Description:</u> The BDCP project description still needs to be determined.	<p>BDCP is a plan/program organized to address the requirements of HCP/NCCP that will provide permits and regulatory protection for a 50-year time frame.</p> <p>The Delta Habitat Conservation and Conveyance Plan (DHCCP) is the BDCP "project" that will be analyzed under CEQA/NEPA.</p> <p>Additional ARCADIS review needed, awaiting information from BDCP team.</p>	Information Requested. The Council and staff requests a complete project description from the BDCP team.		Questions remain regarding the efficacy of the BDCP project description and whether it needs revision for consistency with the Delta Reform Act. Further discussion needed.
4		<u>Goals and objectives:</u> BDCP goals and objectives are not specific.	Additional ARCADIS review needed, awaiting information from BDCP team.		<p>Brief overview of Goals & Objectives including the need for measureable and quantifiable goals and objectives to guide Adaptive Management to trigger specific actions and linked to assurances contained within the HCP & NCCP permits.</p> <p>Goals and Objectives Roadmap provided a framework for a one day workshop held the week of October 25-29.</p> <p>Addressed in <i>Issues For Discussion Document</i>, Chapters 1 and 3.</p>	<p>Independent Science Advisors met with key authors of the Logic Chain on October 26 & 27.</p> <p>Based on previous reports, the ISB is urging for more detailed linkage and processes that integrate the Logic Chain, Adaptive Management, and Governance.</p> <p>An updated report is scheduled for this week (November 4) at BDCP Steering Committee.</p>

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5		<u>Governance</u> : Proposed BDCP governance, including definition of the management entity, operations, and real-time decision-making processes, is not yet well defined.	Additional ARCADIS review needed, awaiting information from BDCP team.		<p>October 21 presentation and discussion on Governance provided new information, albeit on a high level.</p> <p>New details on the implementation structure are provided in the revised Chapter 7 from October 21 meeting.</p> <p>Chapter 7 makes clear the boundaries of responsibility and authority for the proposed Implementation Office and lays out clear paths for regulatory oversight and stakeholder participation.</p> <p>Significant attention is given to implementing conservation measures and continued outreach to stakeholders and the general public.</p>	<p>Gaps in process remain and more information is needed to clarify the mechanisms between the Implementation Office, the Implementation Board, Real-Time Water Operations and habitat restoration activities.</p> <p>Mechanisms, processes, and communication pathways need more detail, including decision making processes, roles and responsibilities of the Implementation Office, the Implementation Board, Management, permittees. How do each of these entities coordinate with the Real-Time Water Operations and implementation of habitat restoration actions.</p> <p>Is adaptive management used similarly for both Real-Time Water Operations as it is for habitat restoration actions? Why is there a separation of management for water operations and implementation of restoration actions?</p> <p>Suggest a flow diagram that outlines communication, processes and how activities are integrated.</p>
6		<u>Plan framework</u> : At this time a complete and integrated framework for BDCP development and implementation is missing.	It is not clear how all pieces of BDCP will fit together. The overall implementation plan lacks detail. We are aware that ongoing activities in this area are occurring but we have not yet seen the results of these activities. Additional ARCADIS review needed, awaiting information from BDCP team.		<p>Integration of water operations with Adaptive Management processes and habitat restoration actions is the challenge.</p> <p>Addressed in Issues For Discussion Document, Chapters 3 and 6 thru 8.</p>	<p>Ongoing discussions on implementation processes have resolved some challenges, although more clarity on specific processes and mechanisms remain.</p> <p>November 4 meeting will discuss:</p> <ul style="list-style-type: none">- Chapters 3 Monitoring & Research and Adaptive Management,- Chapter 5 Effects Analysis,- Chapter 6 Implementation,- Chapter 7 Governance,- Chapter 8 Costs,- Chapter 9 Alternatives to Take, and- Other Stressors and Important Related Actions. <p>Chapters 3, 5, 6 and 7 are integrated at different levels. Clarification is needed on the mechanisms and processes captured within the implementation of issues captured within these chapters.</p>

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7		<u>Adaptive Management</u> : There is inadequate development of a comprehensive adaptive management plan for conservation measures and operational ranges.	The adaptive management plan does not fully integrate technical information into a management and implementation plan; the plan needs informed, clear performance objectives and an outcome-based strategy. While progress in the Adaptive Management Plan (AM) has occurred, further effort is needed to integrate governance with AM. ARCADIS is conducting ongoing review.		Draft of the Logic Chain with models for individual species has been circulated for review and feedback. Feedback was discussed November 26 & 27 during the Independent Science Advisors workshop. Addressed in Issues For Discussion Document, Chapters 3 and 7.	Independent Science Advisors conducted a 1.5 day workshop on October 26 and 27. ISA will author a report on workshop summarizing conclusions of this third iteration on the review of the Logic Chain and integration with Adaptive Management.
8		<u>Schedule</u> : There appears to be insufficient time to adequately address comments already received and to provide a complete evaluation of alternatives prior release of the draft BDCP document on November 18, 2010.	Current BDCP draft document schedule will not likely allow enough time for resolution of pending comments and concerns raised by stakeholders and Independent Science Advisors. BDCP stakeholders have also expressed concern regarding the currently anticipated timing/release of the draft BDCP document prior to the draft EIR/EIS. It has been noted that the BDCP Planning Agreement requires concurrent release to facilitate adequate public review and comment.		Resolved. An updated schedule including concurrent timing/release of the final draft BDCP and the draft EIR/EIS is resolved based on information presented to the Council by the Resources Agency on 9-23-10. BDCP Steering Committee meeting on October 21 reviewed; Plan Implementation, Governance Implementation Structure, Costs and Funding Sources, Yolo Bypass Conservation Measures, and a roll up of the Effects Analysis.	November 4 meeting will discuss: - Chapters 3 Monitoring & Research and Adaptive Management, - Chapter 5 Effects Analysis, - Chapter 6 Implementation, - Chapter 7 Governance, - Chapter 8 Costs, - Chapter 9 Alternatives to Take, and - Other Stressors and Important Related Actions. Ongoing effort to review and comment on individual chapters continues, with time during the next BDCP Steering Committees dedicated for comments to complete the public review draft BDCP plan. Additional time will undoubtedly be needed to adequately address previous and upcoming stakeholder/public comments and fully complete a draft plan that can be released next spring/summer.

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9		<u>Funding</u> : The cost of BDCP implementation, sources of funds, and share arrangements have not yet been identified.	Required HCP funding assurances as stipulated by the HCP process have not been established. At this time, the cost of BDCP implementation, the sources of funding, the share arrangements, and funding guarantees are not well defined. Additional ARCADIS review needed, awaiting information from BDCP team.		<p>Addressed in <i>Issues For Discussion Document</i> , Chapter 8. Cost estimates continue to evolve, with substantial discussion lead by several NGOs during the October 21 BDCP Steering Committee meeting.</p> <p>The most recent capital estimates decreased by 25% from September "Issues for Discussion" document while the operating costs increased by more than 100%.</p> <p>USBR and DWR have not committed to pay for any of the ~25% of BDCP costs not directly related to conveyance and expect public and other funds to pay for conservation measures.</p>	<p>A substantive and detailed breakdown of a prospective funding mechanism is lacking, although discussion continues with specifics anticipated.</p> <p>It has been suggested to the Council that specific and targeted comments, feedback and discussion on key issues be submitted to the BDCP Steering Committee, including clarification of:</p> <p>a) In the view of the applicants, they expect some costs will be allocated to the public. What assurances are there on funding allocation and what proportion should be attributable to the public?</p> <p>b) What happens if state or federal appropriations don't materialize at some point down the road (in the future)?</p> <p>c) Who bears that risk when funding does not materialize?</p> <p>d) Where does supplemental funding come from in such a scenario?</p>
	REGULATORY					
	Ecosystem					
			BDCP needs to address uncertainties in HCP/NCCP, adaptive management, and monitoring to ensure that the plan will meet its conservation goals. Explicit biological goals and objectives are needed to provide the basis for proposed conservation measures.			
		<u>HCP</u> : There does not appear to be compliance with the federal agencies "White Paper on Application of the 5 Point Policy-04-29-10" guidance to BDCP.	So that USFWS and NOAA NMFS can issue permits, BDCP must include clearly defined and scientifically supported biological goals and objectives; an adaptive management plan that tests alternative strategies for meeting those biological goals and objectives; and a robust framework for adjusting future conservation actions. The linkages between individual conservation measures and the restoration actions that achieve those objectives need to be more clearly defined.	Information Requested. We request information from the BDCP team regarding how BDCP is addressing compliance with the "White Paper on Application of the 5 Point Policy-04-29-10"; how BDCP is addressing uncertainties compared to other complex HCPs; and how BDCP is resolving consistency and/or conflicts with other existing HCPs.		<p>A Goals and Objectives workshop was conducted last week and a report will be provided summarizing that workshop during the November 4 BDCP Steering Committee meeting.</p> <p>The basis of this workshop was the October 7 'Guidance Regarding Development and Role of Biological Objectives' roadmap.</p>

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10			Background details are needed to show how other complex HCPs have addressed uncertainties.			
		HCP: There does not appear to be compliance with the federal agencies "White Paper on Application of the 5 Point Policy-04-29-10" guidance to BDCP.	Consistency and/or conflicts with other currently existing HCPs (e.g., Yolo County) must be addressed and resolved. ARCADIS is conducting ongoing review.	Information Requested. We request information from the BDCP team regarding how BDCP is addressing compliance with the "White Paper on Application of the 5 Point Policy-04-29-10"; how BDCP is addressing uncertainties compared to other complex HCPs; and how BDCP is resolving consistency and/or conflicts with other existing HCPs.	October 6 was a public meeting discussing the Conservation Measures identified for the Yolo Bypass. Local county officials have expressed the following: - Collaboration is needed to resolve issues with local participation by stakeholders - Key interest's of Yolo County are flood control and effects on farming and the local economy - Burdens should not be unduly born by the local counties and residents - Moving forward we need 'true participation', protection of agriculture and protection of the viability of Delta communities - Primary concern is for local involvement in the development of any plan, particularly for Yolo County are the important uses of the Yolo Bypass that includes agricultural impacts of increased flooding, clear biological objectives, Westside option, pilot projects to show feasibility, and Fremont Weir operations for flood management and control	Yolo County is discussing an extension of a moratorium on wildlife and habitat conversion. Specifics need clarification.

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11		<p><u>NCCP</u>: Based on our review to date, BDCP conservation outcomes do not appear to be linked to recovery, nor are outcomes demonstrated to be equivalent to recovery.</p>	<p>To satisfy HCP/NCCP requirements the BDCP will need to clearly describe the proposed approach to avoid, minimize, and mitigate, to the maximum extent practicable, impacts on covered species and their habitats while allowing for operations, maintenance, and construction.</p> <p>As an NCCP, the BDCP not only needs to address impact mitigation but will also need to demonstrate an effective species recovery program and to support delisting of listed species and help preclude the need to list additional species in the future.</p> <p>Population metrics should link habitat-specific attributes of quantitative estimates of abundance and quantitative measures of movement and distribution. In addition the BDCP performance metrics must relate to fish vital demographic rates. Additional ARCADIS needed.</p>	<p>Information Requested. We request information from the BDCP team regarding how BDCP is addressing NCCP specific compliance requirements/standards and associated findings.</p>	<p>The BDCP calls for developing the Yolo Bypass Fisheries Enhancement Plan in the six months following permitting. It is anticipated this will reflect the requirements captured in the Yolo County HCP and integrate with the BDCP HCP/NCCP.</p>	<p>National Research Council is meeting in San Francisco December 7 and the Independent Science Board for the Delta is meeting December 8-9.</p> <p>Both groups are anticipated to coordinate during their meetings to enhance the effectiveness of their individual charges and collaborate on review of Delta topics.</p>

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	TECHNICAL					
	Ecosystem & Water Management					
12		<u>Modeling Assessments</u> : The role and adequacy of modeling assessments is unclear based on our review to date.	Our ongoing review is based on limited publicly available information. A clear presentation describing BDCP's integrated modeling program is currently unavailable. The methods and assumptions should be presented in a transparent fashion and additional hydrodynamic modeling assessments should be performed. There are additional needs to optimize benefits and better manage risks for covered species through more refined modeling analyses and a closer examination of the interrelationships between measures. Application of finer scale modeling tools (e.g., daily time step modeling) may be needed.	Information Requested. We request the opportunity to meet and discuss modeling issues with appropriate members of the BDCP team.	Preliminary results discussing the Effects Analysis provided during October 7 & 21 BDCP Steering Committee meeting. Six areas are identified for further evaluation on the potential refinement; (1) North Delta intakes, (2) Spring-run Chinook egg mortality, (3) reduced Sacramento River flow at Rio Vista, (4) South Delta operations, (5) winter-spring X2 outflow, (6) summer-fall X2.	Revised 'Chapter 5 - Effects Analysis' to be presented at November 4 BDCP Steering Committee meeting, with discussion concluding November 18.
13		<u>Logic Chain</u> : To date there appears to be an incomplete development and integration of the logic chain into the BDCP document; the biological goals and objectives are not clear.	Additional ARCADIS review needed. A logic chain has been strongly recommended by the Delta Science Program as a means to provide the overall structure/foundation and necessary linkages to ensure that selected BDCP conservation measures (actions) will achieve the BDCP's specific biological goals and objectives (to be defined) and the associated broad ecosystem and species recovery goals. The logic chain framework also defines the flow of information that supports the adaptive management process to identify what has been learned and how this information will be used to inform ongoing actions and to facilitate a real-time decision-making process. The biological goals for each conservation measure need to link to the stressors/limiting factors, which are tied to the BDCP goals and objectives. Each level needs to roll-up to global goals and objectives. Metrics should link habitat-specific attributes of quantitative estimates of abundance, and quantitative measures of movement and distribution. BDCP performance metrics must be measureable and relate or link to fish vital demographic rates. The current logic chains are species-specific due to a wide range of life histories and ecological requirements of each species. A logic chain based on a community	Information Requested. We request the opportunity to meet and discuss BDCP's incorporation of logic chain issues with appropriate members of the BDCP team.	Brief overview of Goals & Objectives including the need for measureable and quantifiable goals and objectives to guide Adaptive Management to trigger specific actions and linked to assurances contained within the HCP & NCCP permits. Goals and Objectives Roadmap provided a framework for a one day workshop held the week of October 25-29. Addressed in Issues For Discussion Document, Chapters 1 and 3.	Independent Science Advisors met with key authors of the Logic Chain on October 26 & 27. Based on previous reports, the ISB is urging for more detailed linkage and processes that integrate the Logic Chain, Adaptive Management, and Governance. An updated report is scheduled for this week (November 4) at BDCP Steering Committee.

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14		<u>Ecological Models</u> : The ecological models are inadequately integrated.	Additional ARCADIS review needed, awaiting information from BDCP team. Better information on the survival and growth of covered species and predators in the Yolo Bypass, Cache Slough, and Sacramento River is needed to establish baseline conditions against which covered species benefits resulting from implementing the conservation measures can be determined and documented.	Information Requested. We request information from the BDCP team regarding integration of ecological models; linkages between stressors, conservation measures, and goals and objectives; and descriptions of anticipated species benefits.	Analytical models are used to evaluate impacts on a monthly time-step. Hydrological flow models are used as a primary driver of impacts to biological resources.	November 4 meeting will discuss: - Chapters 3 Monitoring & Research and Adaptive Management, - Chapter 5 Effects Analysis, - Chapter 9 Alternatives to Take, and - Other Stressors and Important
15		<u>Stressors</u> : At this time there appears to be a need for more direct linkages between stressors, conservation measures, and goals and objectives. Those stressors that will not be addressed by BDCP actions need to be clearly identified.	Additional ARCADIS review needed, awaiting information from BDCP team.		Effects analysis on stressors is not yet sufficiently detailed to prioritize those operations criteria and conservation measures that will have the greatest positive impact.	NRC will collaborate with the Delta Independent Science Board to evaluate stressors. The Council has requested the ISB to prioritize the importance of stressors.
16		<u>Species Benefits</u> : At this time anticipated species specific restoration benefits vs. integrated ecosystem benefits are unclear.	Additional ARCADIS review needed, awaiting information from BDCP team. The BDCP adaptive management plan is not currently linking conservation measures and predicted outcomes. More detail is needed to link these elements and identify the necessary compliance and performance monitoring.		Effects analysis modeling presented October 7 and 21 BDCP Steering Committee meeting addressed some species benefits and costs. Overall, population benefits are unclear due to uncertainty about effectiveness of habitat restoration conservation measures.	Results of last weeks Goals and Objectives workshop will be reported at the November 4 BDCP Steering Committee meeting.

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17		<u>Flow Criteria</u>	<p>Additional ARCADIS review is needed; SWRCB recommendations should be addressed.</p> <p>Flow criteria, including quantity and patterns, for covered fish species and other aquatic species must be addressed. The quantity of water needed is clearly an important part of the inquiry.</p> <p>In addition to the quantity of water allowed to flow out of the Delta, an equally important question is timing. When does more water need to be released to support different life stages of fish? Given that there are multiple listed species that need protection, including both pelagic and anadromous fish, how can the different flow schedules and needs of all these fish be accommodated and reconciled? What level of contaminant reduction is needed to ensure adequate water quality? Flow into the Delta is of particular importance for anadramous fish and needs to be addressed.</p>	<p>Information Requested. See request in 1-a above.</p>	<p>Effects analysis modeling presented October 7 and 21 BDCP Steering Committee meetings addressed some ecologically important flow parameters.</p> <p>Additional modeling to determine relative water supply costs/benefits versus environmental costs/benefits of specific operational rules has not been made available.</p> <p>It is not clear whether, in evaluating effects of restoration areas, a diverse range of potential hydrologic properties of restoration areas has been considered.</p>	<p>SWRCB Delta flows criteria will be discussed during a public workshop tentatively scheduled for mid-December.</p>
18		<u>Conveyance Alternatives</u>	<p>We have begun review of this topic based on limited publicly available information on DHCCP. Several conveyance design concepts have been identified including canal and tunnel options to support flows ranging from 3,000 to 15,000 cfs, and potential diversion locations have been identified along the Sacramento River in the North Delta. Possible conservation benefits and/or adverse impacts associated with various conveyance options have been generally discussed but are not well established. Risks (e.g., flood and seismic) are still yet to be evaluated.</p>	<p>Information Requested. See request in 1-a above.</p>	<p>Model results to date do not appear to have fully evaluated smaller conveyance alternatives.</p>	<p>Additional information and discussion regarding Alternatives to Take will be discussed at November 4 BDCP Steering Committee meeting.</p>

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19		<u>Monitoring Plan and Scientific Investigations</u>	<p>Limited information related to this topic is currently available and we have just begun our review.</p> <p>A program needs to be developed to specifically identify what data will be collected to effectively measure those metrics designed for compliance and performance, and used to measure expected outcomes for both terrestrial and aquatic resources. These data will also need to support the decision-making process. Related information will include how data are collected, the frequency of collection (statistical power analysis) to increase significance and reduce uncertainty, and the cost of gathering that data to make future decisions. Proposed monitoring data analysis methodologies will also need to be defined.</p>		<p>Specific elements of a cohesive monitoring plan have yet to be articulated.</p> <p>It is anticipated that a monitoring plan that integrates science to reduce uncertainty will link with and integrate the following areas: Logic Chain, Governance, Implementation, Operations, Adaptive Management, and Independent Science.</p> <p>Addressed. in Issues for discussion Document, Chapter 3.</p>	<p>Additional documents on the Monitoring and Research Programs and on Adaptive Management are scheduled to be released at November 18 BDCP Steering Committee meeting.</p>
20		<u>Turbidity Effects</u>	<p>Insufficient information has been provided at this time to enable evaluation of turbidity effects on fish movement and survival. Additional ARCADIS review needed.</p>	<p>Information Requested. We request additional information on turbidity effects from the BDCP team.</p>		<p>Action item pending</p>
21		<u>Sacramento River and North Delta Impacts:</u> The effects of flow diversion on listed species and critical habitat are not adequately evaluated at this time.	<p>Additional ARCADIS review needed.</p> <p>Because of upstream and in-Delta diversions, the San Joaquin River provides little outflow through the Delta. If significant Sacramento River is diverted from the north Delta less fresh water from the Sacramento will flow into the central and south Delta and it is not clear how this will improve water quality or fish and aquatic habitat.</p>	<p>Information Requested. We request additional information on the impacts of diverting Sacramento river water north of the Delta from the BDCP team.</p>	<p>Preliminary results discussing the Effects Analysis provided during October 7 & 21 BDCP Steering Committee meeting.</p> <p>Additional information on the Effects Analysis of the recommended Sacramento River Intake configurations was discussed on October 21.</p> <p>Six areas are identified to evaluate the potential for further refinement, including reduced Sacramento River flow at Rio Vista during specific water year types in the spring, summer and fall.</p>	<p>Additional information on the Effects Analysis of the recommended Sacramento River Intake configurations will be discussed at the November 4 BDCP Steering Committee meeting.</p>
	FUTURE UNCERTAINTIES					
	Ecosystem & Water Management					

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22		<u>Climate change/Sea Level Rise</u>	"10.22.09 SC HO Climate Change Methodology Presentation" shows the use of five different climate scenarios for analyzing effects. However effects analyses to date do not follow this methodology. The incorporation of this type of analysis is important for addressing uncertainty around future climates.	Information Requested. We request information from the BDCP team regarding how BDCP is addressing future uncertainties, such as: 1) climate change; 2) flood and risk management; 3) invasive species;4) stressor-induced changes to conservation measures; and 5) overall system adaptability.	"10.22.09 SC HO Climate Change Methodology Presentation" shows the use of five different climate scenarios for analyzing effects. However effects analyses to date do not follow this methodology. The incorporation of this type of analysis is important for addressing uncertainty around future climates.	
			Most papers currently being published project increasing aridity for California in coming decades (e.g., Dai, 2010, WIREs Climate Change, DOI: 10.1002/wcc.81). How effective would the proposed project be for both water supply and ecosystem function under prolonged drought conditions?			
23		<u>Flood and Risk Management</u>	Additional ARCADIS review needed. There is limited information available from BDCP on flood management and other risks including potential for levee failure at this time.	Information Requested. We request information from the BDCP team regarding how BDCP is addressing future uncertainties, such as: 1) climate change; 2) flood and risk management; 3) invasive species;4) stressor-induced changes to conservation measures; and 5) overall system adaptability.	Risks to water supply from levee failure have been evaluated. The model provides at least rough guidance on potential salinity patterns and water supply constraints following levee failure. Changes in flooding risks have yet to be evaluated.	On December 9, DWR will hold a public forum to discuss Central Valley Flood Management Planning Efforts. The forum will be held at the West Sacramento Civic Center Galleria at 1110 West Capitol Avenue from 1 - 5pm. The Valleywide Forum will provide an update on the progress to develop the 2012 Central Valley Flood Protection Plan and share information about FloodSAFE California.
24		<u>Invasive Species:</u> Limited measures for addressing invasive species impacts have been included at this time within the broad suite of conservation measures.	Additional ARCADIS review needed. Invasive species present ongoing and increasing risk to the distribution and viability of native aquatic organisms and communities within the Delta. The anticipated efficacy of proposed measures is not well supported and significant future uncertainty persists with regard to the effects of proposed BDCP actions on the distribution, abundance, and ecological influence of invasive species during and following BDCP implementation.			Predator control action items still pending

SUMMARY OF UNRESOLVED ISSUES IDENTIFIED TO DATE
Version 1.0 09-13-2010

ISSUE NO.	ISSUE AREA	ISSUE	COMMENTS	PENDING INFORMATION REQUESTS	STATUS AS OF 11-02-10 BDCP Steering Committee meeting	PENDING ACTIONS AS OF 11-02-10 BDCP Steering Committee
25		<u>Conservation Measures:</u> Changes to conservation measures caused by stressors identified from related actions or from the effects of operations have not been identified at this time.	Additional ARCADIS review needed, awaiting information from BDCP team.		Adaptive Management Program should be set up to monitor to create mechanisms for assessment, evaluation and feedback on current and future restoration actions and monitoring efforts.	The November 18 BDCP Steering Committee will discuss Yolo Bypass Conservation Measures.
26		<u>Ability to Adapt to Future Changes:</u> The ability of BDCP to adapt to changes in covered activities, regulations, and other circumstances does not appear to have been fully addressed to date.	Additional ARCADIS review needed, awaiting information from BDCP team.		Chapter 7 states: "If over the course of plan implementation matters arise that are outside the scope of the BDCP, any proposed actions related to those new matters may be implemented through the BDCP only upon appropriate modifications and/or amendments to the Plan." The responsibility for securing amendments falls to the Implementation Office.	What are the mechanisms that direct communication between the Implementation Office, Implementation Board, permittees and NGOs?

Note: Items noted as "Addressed" indicate that they have either been discussed or acknowledged during BDCP Steering Committee meetings, by specific BDCP stakeholders or by the 9-9-10 Issues For Discussion document.